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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/595,342

04/11/2006

Terje H. Houen

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26753

7590

09/10/2009

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EXAMINER

CAMPOS, JR., JUAN J

ART UNIT

PAPER NUMBER

3654

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/595,342	Applicant(s) HOUEN, TERJE H.	
	Examiner Juan J. Campos	Art Unit 3654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 April 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “substantially cylindrical center portion” (see claims 9 and 20) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. **Claims 9-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.** The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

3. The specification, drawings and claims do not disclose how the cylindrical segments 30 can be connected with the inner notches 10 and outer notches 12 (with outer notches 12 having a greater radius, see page 6 lines 6-13). If the arrangement of cylindrical segments 30 are made to fit in the inner notches 10 (by use of fastening hooks), the curved outer edges (that contact the flanges 2 and 2') of the core segments would be prevented from making a mating connection with the notches 12 of a greater radius. This prevention of making a mating connection would also occur if the cylindrical segments are made to fit in outer notches 12, as a mating connection with notches 10 would not be possible.

4. Further, specification, drawings and claims do not disclose how the cylindrical segments 30 can be connected with the dovetail connections 32 (as discussed in page 6 lines 23-25. Similar to the argument above, if the arrangement of the dovetail connections are made to fit when the cylindrical segments are connected to one set of

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notches (10, for example), how would the cylindrical segments fit if they are connected to the other set of notches (12, for example).

5. **Claims 9-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.** The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

6. The specification, drawings and claims do not fully disclose that the connections of the cylindrical segments 30 connected together form a substantially cylindrical center portion (see current claim 1). Further, specification does not appear to support the formation of a substantially cylindrical center portion (see pages 6-7 and figures 1-2).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yarnell et al. (US Patent 5,967,454) in view of Salloum (US Patent 5,004,179) and in further view of Zuk et al. (US Patent 5,791,590).**

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9. **Regarding claim 9**, Yarnell et al. (from here on just referred to as Yarnell) discloses a twin sheet reel core comprising of a plurality of cylindrical segments 20 (see figures 1-4 and 7, and column 3 lines 11-46) that are separably connected together in series to form a cylinder. Yarnell does not disclose a pair of opposing flanges that are separably. Salloum discloses a molded sectional reel comprising a pair of opposing end flanges 12 (see figure 1) that are separably connected to opposite ends of the cylinder 15 (see figures 2 and 4) where each flange comprises a flange sector (see both parts 55 in figure 8) and a flange segment (see right half of flange in figure 5). At the time of the invention, it would have been obvious to a person of ordinary skill in this art to substitute the flanges 12a and 12b (of Yarnell) with the flanges 12 (of Salloum) so that the cylindrical segments connect to respective flanges with flange sectors and flange segments. The motivation would be to further improve the storage of the Yarnell reel core (see column 1 lines 4-10).

10. **Further regarding claim 9**, Yarnell does not disclose the cylindrical segments being formed to different diameters. Further, Yarnell does disclose that the invention has a large degree of modification and design latitude (one being to increase the diameter of the core, or cylinder 10, see column 4 lines 43-63). Zuk (from here on just referred to as Zuk) discloses a universal reel comprising of grooves (26 and 28, or notches as considered by the examiner) on flanges (12 and 14) that determine the hub (or cylinder) diameter. At the time of the invention, it would have been obvious to a person of ordinary skill in this art to design the cylindrical segments (of Yarnell) so that increasing the number of segments increases the diameter of the cylinder. The

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motivation for the design would be to design the cylindrical segments 20 (of Yarnell) so that they are capable of composing different diameters, such as the diameters of grooves (or notches) 26 and 28.

11. **Regarding claims 10-12**, Salloum further shows each opposing inner face of the flanges 12 are configured to mate with and separably connect to an end of the cylinder (see figures 2 and 4). Further, since the flange sector (see both parts of 55 in figure 8) and a flange segment (see right half of flange in figure 5) would connect to cylinder 15, Salloum shows the flange sector and flange segment capable of connecting to a cylinder. Salloum further shows the flange sector and flange segment (see definitions in regarding claim 9 above) are connected together in a splice connection (see figures 8, 5 and 6).

12. **Claims 13-16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yarnell et al. (US Patent 5,967,454) in view of Salloum (US Patent 5,004,179) and in further view of Zuk et al. (US Patent 5,791,590) and in further view of Faulkner (US Patent 5,474,254).**

13. **Regarding claims 13 and 19**, Zuk further shows a first plurality of notches 26 and a second plurality of notches 28 about an axis, the second plurality of notches having a greater radius. None of Yarnell, Salloum and Zuk discloses the cylinder further comprising of fastening hooks. Faulkner discloses a spool and method of making same comprising a cylinder 20 with fastening hooks 26 used to connect to notches 37 (see figure 1 and column 2 line 29-32). At the time of the invention, it would have been obvious to a person of ordinary skill in this art to modify the flanges 12 (of Salloum) with

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two pluralities of notches (26 and 28) and modify the cylindrical segments 20 (of Yarnell) with fastening hooks (26) so that the cylinder can be connected to the flanges using hooks and notches. The motivation would for the modification would be provide the flanges (of Salloum) the capability to connect cylindrical segments at diameters (as taught by Yarnell and Zuk) and connect the cylindrical segments to the flanges using a mechanical equivalent connection to the bolts 50 (of Salloum).

14. **Regarding claim 14**, Salloum further shows each flange sector flange sector (see both parts of 55 in figure 8) comprises a series of interconnected triangular flange portions (see figure 8); the portions would be connected by parts 56 and 57. Salloum does not disclose the position of the first plurality of notches on the triangular flange portions. At the time of the invention, it would have been obvious to a person of ordinary skill in this art to position the first plurality of notches on the triangular flange portions. The motivation would be to provide notches for a first diameter of the cylinder.

15. **Regarding claim 15**, Salloum further shows each flange sector flange sector (see both parts of 55 in figure 8) comprises a central portion that defines an aperture (see rectangular corners of both 55 in figure 8).

16. **Regarding claim 16**, Salloum further shows a flange segment (see right half of flange in figure 5) defining a rolling surface (the circumferential surface of the right half of flange in figure 5). Salloum does not disclose the position of the second plurality of notches on the flange segment. At the time of the invention, it would have been obvious to a person of ordinary skill in this art to position the second plurality of notches on the

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flange segment. The motivation would be to provide notches for a second diameter of the cylinder.

17. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yarnell et al. (US Patent 5,967,454) in view of Salloum (US Patent 5,004,179) and in further view of Zuk et al. (US Patent 5,791,590) and in further view of Dobson (US Patent 819,866).

18. Regarding claim 17, None of Yarnell, Salloum and Zuk disclose the cylindrical segments are interconnected by dovetail connections. Dobson shows a sheet-metal cylinder segment (see figure 5, considered a cylinder segment by the examiner) that uses a series of teeth (a) and notches (b) to connect the sheet-metal cylindrical segment together, see figure 5. The teeth and notches shown by Dobson are considered dovetail connections by the examiner. At the time of the invention, it would have been obvious to a person of ordinary skill in this art to substitute the dovetail connection (of Dobson) for the finger 30 and socket enclosure (see figure 6 of Yarnell) connection. The motivation would be to use a mechanical equivalent connection to the finger/socket enclosure connection (see figure 6 of Yarnell).

19. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yarnell et al. (US Patent 5,967,454) in view of Salloum (US Patent 5,004,179) and in further view of Zuk et al. (US Patent 5,791,590) and in further view of Campbell (US Patent 3,940,085).

20. Regarding claim 18, None of Yarnell, Salloum and Zuk disclose the cylindrical segments are interconnected by screw-bolt-joints. Campbell shows a collapsible reel

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that comprises of cylindrical segments 12 connected together by a pair of bolts 32 and holes 34 (considered screw-bolt-joints, see figure 2). At the time of the invention, it would have been obvious to a person of ordinary skill in this art to substitute the screw-bolt-joints (of Campbell) for the finger 30 and socket enclosure (see figure 6 of Yarnell) connection. The motivation would be to use a mechanical equivalent connection to the finger/socket enclosure connection (see figure 6 of Yarnell).

21. Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yarnell et al. (US Patent 5,967,454) in view of Salloum (US Patent 5,004,179) and in further view of Zuk et al. (US Patent 5,791,590).

22. Regarding claim 20, Yarnell et al. (from here on just referred to as Yarnell) discloses a twin sheet reel core comprising of a plurality of cylindrical segments 20 (see figures 1-4 and 7, and column 3 lines 11-46) that are separably connected together in series to form a cylindrical center portion. Yarnell does not disclose a pair of opposing flanges that are separably. Salloum discloses a molded sectional reel comprising a pair of opposing end flanges 12 (see figure 1) that are separably connected to opposite ends of the cylinder 15 (see figures 2 and 4) where each flange comprises a flange sector (see both parts 55 in figure 8) and a flange segment (see right half of flange in figure 5). At the time of the invention, it would have been obvious to a person of ordinary skill in this art to substitute the flanges 12a and 12b (of Yarnell) with the flanges 12 (of Salloum) so that the cylindrical segments connect to respective flanges with flange sectors and flange segments. The motivation would be to further improve the storage of the Yarnell reel core (see column 1 lines 4-10).

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23. Further regarding claim 20, Yarnell does not disclose the cylindrical segments being formed to different diameters. Further, Yarnell does disclose that the invention has a large degree of modification and design latitude (one being to increase the diameter of the core, or cylinder 10, see column 4 lines 43-63). Zuk (from here on just referred to as Zuk) discloses a universal reel comprising of grooves (26 and 28, or notches as considered by the examiner) on flanges (12 and 14) that determine the hub (or cylinder) diameter. At the time of the invention, it would have been obvious to a person of ordinary skill in this art to design the cylindrical segments (of Yarnell) so that increasing the number of segments increases the diameter of the cylindrical center portion. The motivation for the design would be to design the cylindrical segments 20 (of Yarnell) so that they are capable of composing different diameters, such as the diameters of grooves (or notches) 26 and 28.

24. Regarding claims 21-23, Salloum further shows each opposing inner face of the flanges 12 are configured to mate with and separably connect to an end of the cylindrical center portion (see figures 2 and 4). Further, since the flange sector (see both parts of 55 in figure 8) and a flange segment (see right half of flange in figure 5) would connect to cylindrical center portion 15, Salloum shows the flange sector and flange segment capable of connecting to a cylindrical center portion. Salloum further shows the flange sector and flange segment (see definitions in regarding claim 9 above) are connected together in a splice connection (see figures 8, 5 and 6).

25. Claims 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yarnell et al. (US Patent 5,967,454) in view of Salloum (US Patent 5,004,179)

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and in further view of Zuk et al. (US Patent 5,791,590) and in further view of Faulkner (US Patent 5,474,254).

26. Regarding claims 24-25, Zuk further shows a first plurality of notches 26 and a second plurality of notches 28 about an axis, the second plurality of notches having a greater radius. None of Yarnell, Salloum and Zuk discloses the cylindrical center portion further comprising of fastening hooks. Faulkner discloses a spool and method of making same comprising a cylinder 20 with fastening hooks 26 used to connect to notches 37 (see figure 1 and column 2 line 29-32). At the time of the invention, it would have been obvious to a person of ordinary skill in this art to modify the flanges 12 (of Salloum) with two pluralities of notches (26 and 28) and modify the cylindrical segments 20 (of Yarnell) with fastening hooks (26) so that the cylindrical center portion can be connected to the flanges using hooks and notches. The motivation would for the modification would be provide the flanges (of Salloum) the capability to connect cylindrical segments at diameters (as taught by Yarnell and Zuk) and connect the cylindrical segments to the flanges using a mechanical equivalent connection to the bolts 50 (of Salloum).

27. Regarding claim 26, Salloum further shows each flange sector flange sector (see both parts of 55 in figure 8) comprises a series of interconnected triangular flange portions (see figure 8); the portions would be connected by parts 56 and 57. Salloum does not disclose the position of the first plurality of notches on the triangular flange portions. At the time of the invention, it would have been obvious to a person of

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ordinary skill in this art to position the first plurality of notches on the triangular flange portions. The motivation would be to provide notches for a first diameter of the cylinder.

28. Regarding claim 27, Salloum further shows each flange sector flange sector (see both parts of 55 in figure 8) comprises a central portion that defines an aperture (see rectangular corners of both 55 in figure 8).

29. Regarding claim 28, Salloum further shows a flange segment (see right half of flange in figure 5) defining a rolling surface (the circumferential surface of the right half of flange in figure 5). Salloum does not disclose the position of the second plurality of notches on the flange segment. At the time of the invention, it would have been obvious to a person of ordinary skill in this art to position the second plurality of notches on the flange segment. The motivation would be to provide notches for a second diameter of the cylinder.

Response to Arguments

30. Applicant's arguments filed June 4, 2009 have been fully considered but they are not persuasive.

31. Regarding applicant's argument about "Yarnell not teaching the modular arrangement of claim 9" (see page 8 lines 6-15 of remarks). First, the examiner considers passage of Yarnell (see column 4 lines 43-63) as providing motivation for modification with respect to the design of the invention, and not "at a manufacturing step" (as discussed in the remarks). Second, Yarnell (as used in the rejections) is used

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as a separable reel device with the motivation of provided of modifying the design of the invention. The "teaching" of having different diameters is considered provided by Zuk.

32. Regarding applicant's argument about the Zuk reference (see page 8 lines 16-27) of remarks). The examiner considers the core 16 of Zuk (see figures 5-6) capable of being able to form a substantially cylindrical center portion. Such a teaching of segments forming a core of different diameters is obvious because reversing the connection of the flaps 36 and tabs 38 to the grooves 26 and 28 (compared to the connection shown in figure 6) would provide a substantially cylindrical center portion of a different radius.

33. Regarding applicant's argument about the solution to the problem of modularity in the prior art (see page 9 lines 2-9 of remarks). As discussed above regarding the 112 1st rejections, the examiner does not agree that applicant has the solution of modularity over the prior art.

Conclusion

34. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan J. Campos whose telephone number is (571) 270-5229. The examiner can normally be reached on 9am-6pm (Monday-Thursday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Q. Nguyen can be reached on (571) 272-6952. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John Q. Nguyen/
Supervisory Patent Examiner, Art Unit 3654

/JJC/

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